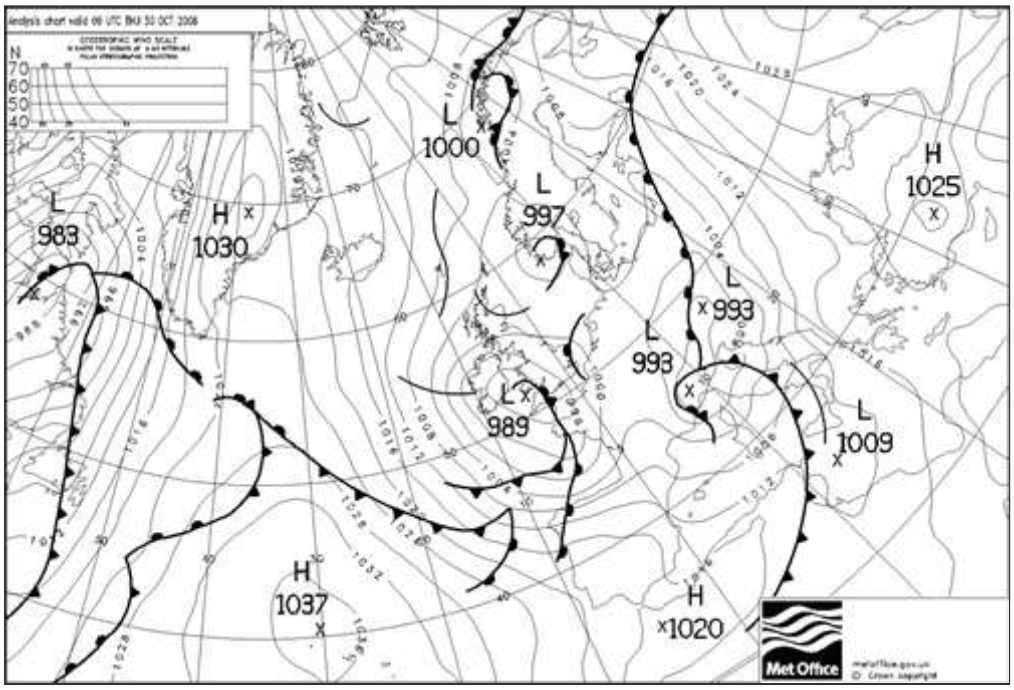
© Crown copyright • www.metoffice.gov.uk

Hail/thunderstorms over east Devon - 29/30 October 2008

An area of low pressure and associated frontal system over south-west England at 0000 UTC on 30 October 2008 (see chart below), resulted in localised but intense hail/thunderstorms over east Devon.

Properties and roads in the Ottery St. Mary and Feniton areas were flooded, and the main road (A30) between Honiton and Exeter was closed.

Synoptic situation at 0000 UTC on 30 October 2008



Rainfall values and return period information below for Ottery St. Mary, Kings School.

- 27-hour rainfall total (0900 UTC on the 29th to 1200 UTC on the 30th) of 187 mm, which would give a return period >200 years.
- Estimated 160 mm in 3 hours (period ending 0300 UTC), which would give a return period >200 years.
- Estimated 135 mm in 2 hours (period ending 0200 UTC), which would give a return period >200 years.

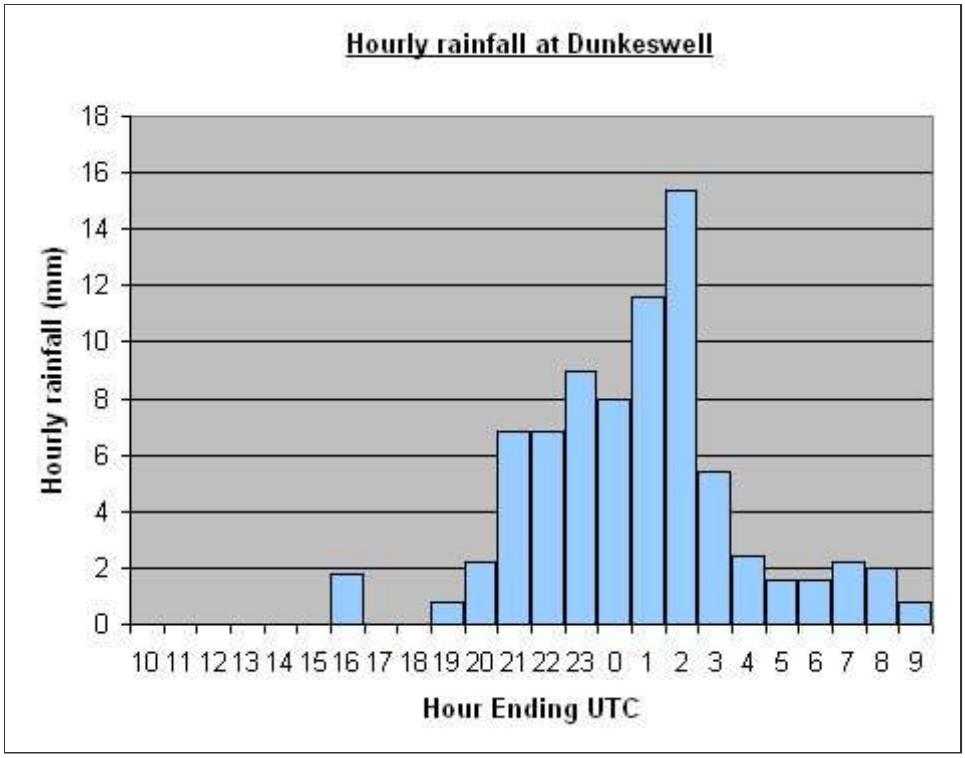
Rainfall values and return period information below for Dunkeswell.

- 24-hour rainfall total (0900 UTC on the 29th to 0900 UTC on the 30th) of 78.4 mm, which would give a return period of 35 years. This is the second-wettest 0900-0900 period for Dunkeswell, with the wettest being 109.9 mm on 28th July 1969.
- 63.0 mm in 7 hours (period ending 0300 UTC), which would give a return period of 33 years.
- 27.0 mm in 2 hours (period ending 0200 UTC), which would give a return period of 8 years.

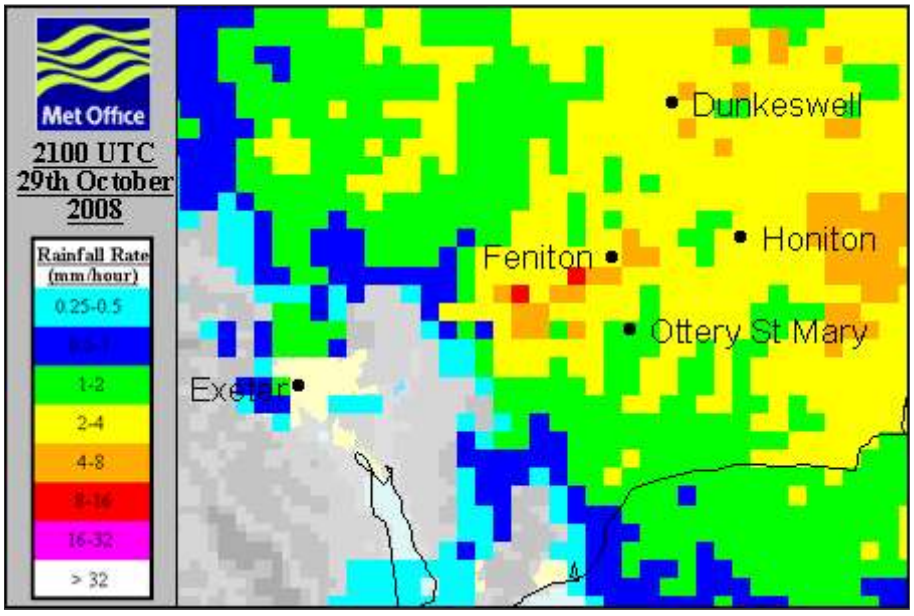
8 years.

- 15.4 mm in 1 hour (hour ending 0200 UTC), which would give a return period of 3 years.

The graph below shows the hourly rainfall totals at Dunkeswell between 0900 UTC on 29 October 2008 and 0900 UTC on 30 October 2008.



The radar animation below uses 15-minute 1/2/5 km composite data between 2100 UTC on 29 October 2008 and 0300 UTC on 30 October 2008.



Please note: The empirical relationship between radar reflectivity and rainfall rate is fixed whereas in reality this is highly dependent on precipitation type and is very different for rain and hail.

Further information

whereas in reality this is highly dependent on precipitation type and is very different for rain and hail.

Further information

Grahame, N., Riddaway, B., Eadie, A., Hall, B. and McCallum, E., 2009: Exceptional hailstorm hits Ottery St Mary on 30 October 2008. *Weather*, **64**, 256-263.

Photographs from Ottery St. Mary below, reproduced by permission of Margaret Bargmann.